

Burien

Lake Overview

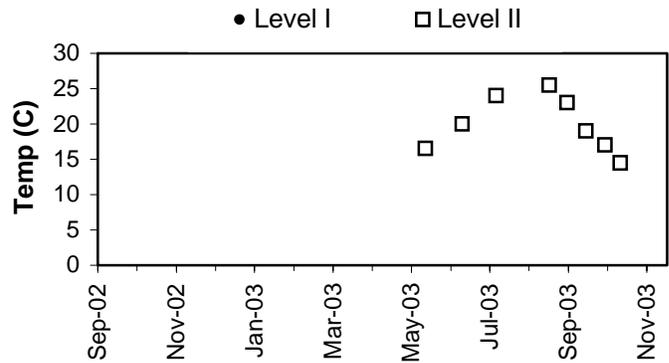
Volunteer monitoring began at Lake Burien in 1994, continued in 1998, and then resumed in 2000 through 2003. The data collected classify this lake in the city of Burien at low to moderate in primary productivity (oligotrophic - mesotrophic) with very good water quality. Since the lake surface makes up 18% of the relatively large drainage area, direct precipitation is important, as well as stormwater runoff and groundwater inputs. Land use analysis of 2002 aerial photographs showed over 97% of the surrounding watershed has been developed for uses other than agriculture. There are no significant wetlands in the basin other than the lakeshore itself.

Lake Burien has no public access boat ramp, but residents should continue to watch nearshore aquatic plants to catch early infestations of Eurasian milfoil, Brazilian elodea or other noxious aquatic weeds.

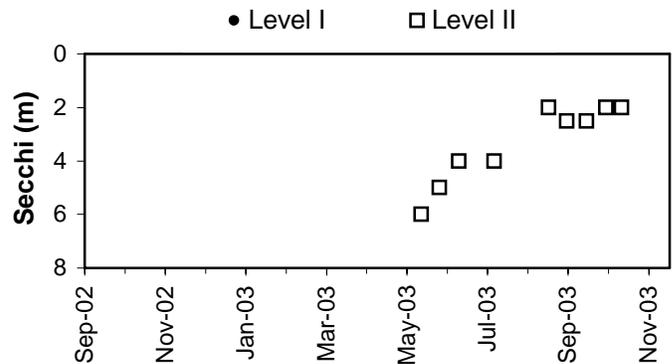
Physical Parameters

The Level II Secchi transparency ranged between 2.0 and 6.0m during the sampling season. Level II surface water temperatures reached a maximum of 25.5 degrees Celsius. No precipitation or water level records were available for the year.

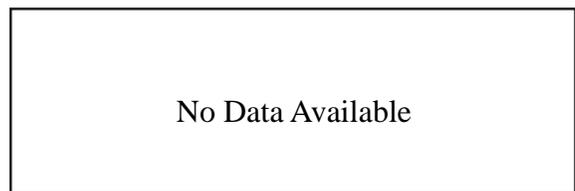
Lake Temperature



Secchi Depth

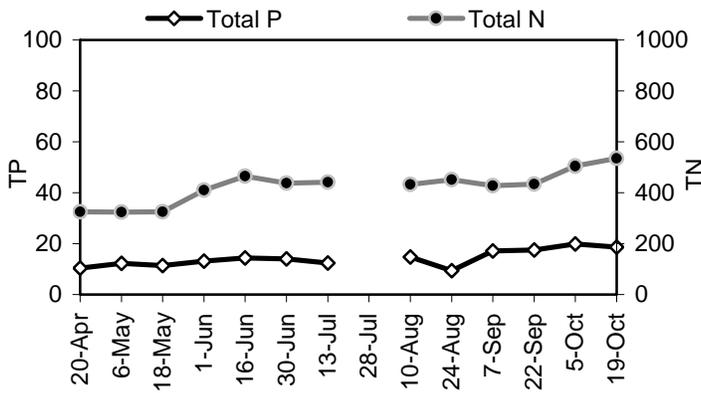


Lake Level and Precipitation

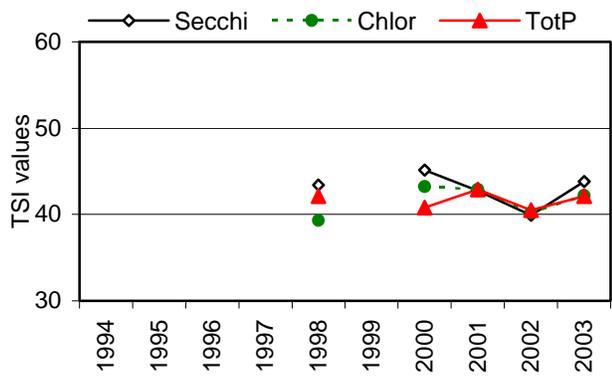


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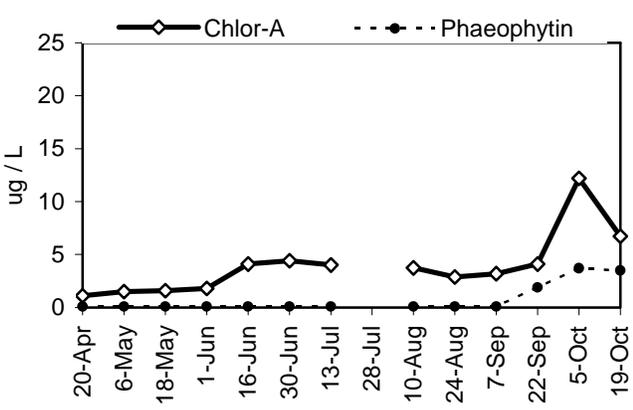
Nutrient Analysis



TSI Ratings



Chlorophyll a Concentrations (ug/L)



Nutrient Analysis and TSI Ratings

Total phosphorus remained fairly constant through the season, while total nitrogen rose very slowly. The N:P ratio ranged from 25 to 48, suggesting poor conditions for bluegreens. The 2003 TSI values for the three indicators were almost identical to 2001 values, remaining in the lower part of the mesotrophic range, similar to previous years.

Chlorophyll and Algae

Chlorophyll content was low in spring and rose slightly through summer, then climbed to a peak early in October and declined by the end of the sampling season. The algae were dominated by unidentified chrysophyte species, the cryptophyte *Cryptomonas*, and the diatom *Fragilaria*. The bluegreens *Anabaena* and *Aphanizomenon* were both common in early May, but never made large populations.

Common algae	Group
<i>Cryptomonas</i> spp	cryptophyte
unidentified species	chrysophyte
<i>Fragilaria</i> sp	diatom-chrysophyte

No Level I Data
Available For This Lake

Burien

2003 Level II Data

Date (2003)	Temp (°C)	Secchi (m)	Chl-a (µg/l)	TP (µg/l)	TN (µg/l)	Algae Obsv.	N:P	Calculated TSI			Notes
								Secc	chl-a	TP	
20-Apr			1.1	10.4	326	0	31		31.5	37.9	No secchi or temperature.
6-May			1.5	12.3	324		26		34.5	40.4	
18-May	16.5	6.0	1.6	11.4	325	1	29	34.1	35.2	39.3	
1-Jun		5.0	1.8	13.2	410	1	31	36.8	36.3	41.4	
16-Jun	20.0	4.0	4.1	14.4	466	1	32	40.0	44.4	42.6	
30-Jun			4.4	14.0	438		31		45.1	42.2	No secchi, temperature, or algae observations.
13-Jul	24.0	4.0	4.0	12.4	442		36	40.0	44.2	40.5	
28-Jul											No sample.
10-Aug			3.7	14.8	433		29		43.5	43.0	
24-Aug	25.5	2.0	2.9	9.4	452	0	48	50.0	41.0	36.5	
7-Sep	23.0	2.5	3.2	17.2	428	1	25	46.8	42.0	45.2	
22-Sep	19.0	2.5	4.1	17.5	434	0	25	46.8	44.4	45.4	
7-Oct	17.0	2.0	12.2	19.9	504	0	25	50.0	55.1	47.3	
19-Oct	14.5	2.0	6.7	18.7	534		29	50.0	49.3	46.4	
	Temp (°C)	Secchi (m)	Chl-a (µg/l)	TP (µg/l)	TN (µg/l)	Algae Obsv.	N:P	Calculated TSI			
								Secc	chl-a	TP	
Mean	19.9	3.3	4.0	14.3	424.3	0.5	31	43.8	42.0	42.2	TSI Average = 42.7
Median	19.5	2.5	3.7	14.0	434.0	1	29	46.8	43.5	42.2	
Min	14.5	2.0	1.1	9.4	324.0	0	25	34.1	31.5	36.5	
Max	25.5	6.0	12.2	19.9	534.0	1	48	50.0	55.1	47.3	
Count	8	9	13	13	13	8	13	9	13	13	